

In re application of: Yong Zhang et al.

Examiner:

Serial No. 09/990,598

Art Unit: 2881

Filed: 11/20/2001

For: PORTABLE LOW-POWER GAS DISCHARGE LASER

Marked Up Claims

32. (amended) A gas discharge laser, comprising:

a discharge tube made of low loss dielectric material and containing laser gas, the discharge tube having a first end and a second end;

a pair of electrodes located adjacent to and outside of the discharge tube and disposed on opposite sides of it, the electrodes causing a laser discharge to occur in the tube, the electrodes not in physical contact with the laser discharge;

an output coupler located near the first end of the discharge tube and flexibly sealed to the discharge tube with an elastomeric seal; and

a mirror located near the second end of the discharge tube, to form a laser cavity along the inside of the discharge tube between the mirror and the output coupler.

38.(amended) A method of constructing a gas discharge laser, comprising the steps of:

[sealably axially] supporting a discharge tube made of dielectric material between a mirror and an output coupler so as to form a sealed laser cavity between the mirror and the output coupler along the inside of the discharge tube, the output coupler being flexibly sealed to the discharge tube with an elastomeric seal;

mounting a pair of electrodes adjacent to and outside of the discharge tube and disposed on opposite sides of it so that [the] a laser discharge occurs in the tube, the electrodes being not in physical contact with the laser discharge; and

evacuating the laser cavity and then installing laser gas into it.